

REMARKS

Applicant requests favorable reconsideration and allowance of the subject application in view of the preceding amendments and the following remarks.

Claims 13, 15-21 and 24-27 are presented for consideration. Claims 13 and 21 are independent. Claims 14, 22 and 23 have been canceled without prejudice or disclaimer. Claims 13, 21 and 24 have been amended to clarify features of the subject invention, while claim 27 has been added to recite additional features of the subject invention. Support for these changes and this claim can be found in the original application, as filed. Therefore, no new matter has been added.

Applicant requests favorable reconsideration and withdrawal of the rejections set forth in the final Office Action dated July 24, 2006.

Claims 13-18, 21-23 and 26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese patent document number 7-267192 to Yagishita in view of U.S. Patent No. 5,990,587 to Shimanovich et al. Claims 19, 20, 24 and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Yagishita document in view of the Shimanovich et al. patent as applied above to claims 13 and 21, and further in view of U.S. Patent No. 6,496,248 to Tanaka. Applicant submits that the cited art, whether taken individually or in combination, does not teach or suggest many features of Applicant's present invention, as previously recited in

independent claims 13 and 21. Therefore, these rejections are respectfully traversed.

Nevertheless, Applicant submits that independent claims 13 and 21, for example, as presented, amplify the distinctions between the present invention and the cited art.

In one aspect of the present invention, independent claim 13 recites a supporting apparatus for supporting a weight of a member which mounts a movable stage to a base. The apparatus includes a first permanent magnet arranged on one of the member and the base, a second permanent magnet unit arranged so that the first permanent magnet is interposed, and a linear motor which is arranged between the member and the base, and provides a force which acts on the member. The magnetized directions of the first permanent magnet and the second permanent magnet unit are perpendicular to a gravity direction of the member, and a width of the second permanent magnet unit in a perpendicular direction to the magnetized directions and the gravity direction is different from a width of the first permanent magnet.

In another aspect of the present invention, independent claim 21 recites a supporting apparatus for supporting a weight of a member which mounts a movable stage to a base in a first direction. The supporting apparatus includes a first permanent magnet arranged on the member, and magnetized in a first direction perpendicular to a gravity direction, a second permanent magnet unit arranged on the base, and arranged so that the first permanent magnet is interposed, and driving means for driving the second permanent magnet unit in order to change a facing area of the first and second permanent magnets in a second direction perpendicular to the first direction and the gravity direction.

Applicant submits that the cited art, whether taken individually or in combination, does not teach or suggest such features of the present invention, as recited in independent claims 13 and 21.

The Examiner considers the Yagishita document to teach a supporting apparatus for supporting a member which mounts a movable stage 1 to a base 2, in which the supporting apparatus is mounted on a vertical plane of a cabin. The Examiner asserts that the apparatus includes a first magnet 3 arranged on one of the member and the base, a second magnet unit 4, 4' arranged on the other of the member and the base on which the first magnet is arranged, and arranged so that the first magnet is interposed.

The Examiner further asserts that elements 10 and 11 in the Yagishita document are electromagnetic actuators. Applicant submits, however, that elements 10 and 11 in the Yagishita document denote power sources, and do not denote electromagnetic actuators. Applicant submits, therefore, that the Yagishita document does not teach or suggest a linear motor, which is arranged between a member and a base, and provides a force which acts on the member, in the manner of the present invention recited in independent claim 13.

Still further, in the arrangement shown in Figure 2 of the Yagishita document, a gravity direction accords with a magnetized direction. In this regard, the Yagishita document also does not teach or suggest that magnetized directions of the first permanent magnet and the second permanent magnet unit are perpendicular to a gravity direction of the member, in the manner of the present invention recited in independent claim 13.

Still further, Applicant submits that the Yagishita document does not teach or suggest the arrangement of the first permanent magnet, the second permanent magnet, and the driving means of the present invention recited in independent claim 21, in which the driving means drives the second permanent magnet unit in order to change a facing area of the first and second permanent magnets in a second direction perpendicular to the first direction and the gravity direction. In this regard, the driving means of the present invention recited in independent claim 21 is discussed in more detail in the subject specification on page 16, lines 16-27.

Applicant further submits that the remaining art cited does not cure the deficiencies noted above with respect to the Yagishita document.

The Examiner relies on the Shimanovich et al. patent for teaching the use of magnetic means in an actuator, wherein the magnet may be a permanent magnet or an electromagnet. The Examiner relies on the Tanaka patent for teaching an exposure apparatus and/or a device manufacturing method. Applicant submits, however, that neither the Shimanovich et al. patent nor the Tanaka patent teaches or suggests at least the salient features of Applicant's present invention, as recited in independent claims 13 and 21, which have been discussed above. Namely, those patents are silent with respect to the arrangement of the first permanent magnet, the second permanent magnet, and the linear motor of the present invention recited in independent claim 13. Likewise, those citations are silent with respect to the arrangement of the first permanent magnet, the second permanent magnet and the driving means of the present invention, recited in independent claim 21. Accordingly, those documents add nothing to the

teachings of the Yagishita document that would render obvious Applicant's present invention, as recited in independent claims 13 and 21.

For the foregoing reasons, Applicant submits that the present invention, as recited in independent claims 13 and 21, is patentably defined over the cited art, whether that art is taken individually or in combination.

Dependent claims 15-20 and 24-27 also should be deemed allowable, in their own right, for defining other patentable features of the present invention in addition to those recited in their respective independent claims. Further individual consideration of these dependent claims is requested.

Applicant further submits that the instant application is in condition for allowance. Favorable reconsideration, withdrawal of the rejections set forth in the above-noted Office Action and an early Notice of Allowance are requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010 All correspondence should continue to be directed to our address given below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Steven E. Warner", is written over a horizontal line.

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